

I. Rejection Under 35 U.S.C. § 112, Second Paragraph

The Examiner rejects claims 1 under 35 U.S.C. § 112, Second Paragraph as being indefinite. Applicants cancel claim 1 and add claims 41-52 to specify the invention. Withdrawal of this ground of rejection is therefore respectfully requested.

II. Rejection Under 35 U.S.C. § 102(a) (Livak, et al.)

The Examiner rejects claim 1 under 35 U.S.C. § 102(a) as being anticipated by Livak, et al. Applicants note that this application is a continuation-in-part of Application Serial No. 08/340,558, filed November 16, 1994, now U.S. Patent No. 5,538,848. Since the parent application was filed before the publication date of the Livak, et al. reference (1995), Livak, et al. is not a prior art reference under 35 U.S.C. § 102(a) relative to the parent application.

Applicants note that the pending claim 41 replacing claim 1 is supported by the parent application. Independent claim 41 specifies a method for detecting a target polynucleotide in a sample where an oligonucleotide probe selectively hybridizes to the target polynucleotide, and when the oligonucleotide probe is hybridized to the target polynucleotide the fluorescence intensity of the reporter molecule is greater than the fluorescence intensity of the quencher molecule. In the parent application, a method of monitoring the amplification of a target polynucleotide is described where fluorescence of a "reporter molecule is substantially unquenched whenever the oligonucleotide probe is in a double stranded state hybridized to [the] target polynucleotide" (Abstract, lines 8-11). In Table 3 of the parent application, entry P2-27 shows that when the probe hybridizes to the target molecule to form a double stranded complex, fluorescence of the reporter 6-FAM at 518 nm (ds: 557.53) is greater than that of the quencher TAMRA at 582 nm (ds: 89.47). Therefore, the pending independent claim 41 is supported by the parent application.

Since the pending claim 41 is supported by the parent application and since the filing date of the parent application predates the publication date of Livak, et al., the rejected claims are not anticipated by Livak, et al. under 35 U.S.C. § 102(a). Withdrawal of this rejection is therefore respectfully requested.

III. Rejection Under 35 U.S.C. § 102(b)

The Examiner rejects claim 1 under 35 U.S.C. § 102(b) as being anticipated by Bagwell, Lee, et al., and Heller, et al.

Applicants cancel claim 1 and add independent claim 41.

None of these cited references anticipates the hybridization method being claimed because none of the references utilizes a probe specified in claim 41. In view of this distinction, Applicants respectfully request that the Examiner withdraw the present rejection under 35 U.S.C. § 102(b).

IV. Rejection Under Obviousness-Type Double-Patenting

The Examiner rejects claim 1 under the doctrine of obviousness-type double-patenting as being unpatentable over claim 1 of US Patent No. 5,876,930. A terminal disclaimer for the US Patent No. 5,876,930 in compliance with 37 CFR 1.321(c) is submitted herein to overcome this ground of rejection.

CONCLUSION

In light of the Amendments and the arguments set forth above, Applicants earnestly believe that they are entitled to a letters patent, and respectfully solicit the Examiner to expedite prosecution of this patent application to issuance. Should the Examiner have any questions, the Examiner is encouraged to telephone the undersigned.

Respectfully submitted,

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